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21. Juni 2005

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 Indexed, Indexed Frequently
 ALANA Planning Act

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1255WOORD01	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, Item 5 below.	
International application No. PCT/EP2005/050708	International filing date (<i>day/month/year</i>) 17/02/2005	(Earliest) Priority Date (<i>day/month/year</i>) 18/02/2004
Applicant ALTANA PHARMA AG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. 1.

2. ☒ Certain claims were found unsearchable (See Box II).

3. ☐ **Unity of invention is lacking (see Box III).**

4. With regard to the title,

☐ the text is approved as submitted by the applicant.

X the text has been established by this Authority to read as follows:

NOVEL GUANIDINYL-SUBSTITUTED HYDROXY-6-PHENYLPHENANTHRIDINES AS EFFECTIVE
PHOSPHODIESTERASE (PDE) 4 INHIBITORS

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

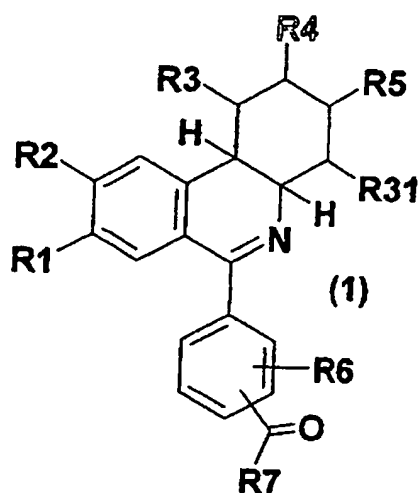
☐ as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

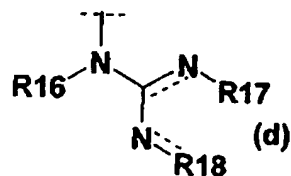
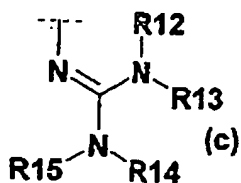
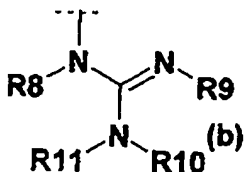
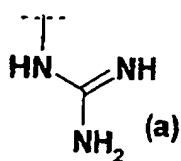
Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

Compounds of a certain formula 1, in which R1, R2, R3, R31, R4, R5, R6 and R7 have the meanings indicated in the description, are novel effective PDE4 inhibitors



in which

R7 is a radical of formulae (a), (b), (c) or (d)



A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D221/12 A61K31/473 A61P11/00 A61P29/00 A61P37/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2004/018431 A (WEINBRENNER STEFFEN ; SCHMIDT BEATE (DE); ALTANA PHARMA AG (DE); FLOCK) 4 March 2004 (2004-03-04) see examples 1-13, claims 1 to 13; -----	1-14
Y	WO 02/066476 A (BYK GULDEN LOMBERG CHEM FAB ; FLOCKERZI DIETER (DE)) 29 August 2002 (2002-08-29) see definition of residue R5 and examples, claims 1-16 -----	1-14
Y	US 6 306 869 B1 (FLOCKERZI DIETER) 23 October 2001 (2001-10-23) see definition of residue R8, examples 1-3 and claims -----	1-14
Y	US 6 476 025 B1 (GUTTERER BEATE) 5 November 2002 (2002-11-05) see examples 16 and 17 and claims 1-10 -----	1-14



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Date of the actual completion of the international search

9 June 2005

Date of mailing of the international search report

21/06/2005

Name and mailing address of the ISA

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Traegler-Goeldel, M

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 13, 14
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 13 and 14 are directed to a method of treatment of the human/animal body (Article 52(4) EPC), the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004018431	A	04-03-2004	AU 2003253408 A1	11-03-2004
			CA 2495597 A1	04-03-2004
			WO 2004018431 A2	04-03-2004
			EP 1537086 A2	08-06-2005
WO 02066476	A	29-08-2002	AT 287403 T	15-02-2005
			CA 2438717 A1	29-08-2002
			DE 60202669 D1	24-02-2005
			WO 02066476 A1	29-08-2002
			EP 1377574 A1	07-01-2004
			JP 2004526712 T	02-09-2004
			US 2004097537 A1	20-05-2004
US 6306869	B1	23-10-2001	AT 234301 T	15-03-2003
			AU 3928999 A	23-11-1999
			CA 2330738 A1	11-11-1999
			DE 59904535 D1	17-04-2003
			DK 1075477 T3	30-06-2003
			WO 9957118 A1	11-11-1999
			EP 1075477 A1	14-02-2001
			ES 2195571 T3	01-12-2003
			JP 2002513793 T	14-05-2002
			PT 1075477 T	31-07-2003
			SI 1075477 T1	31-08-2003
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			AU 2289600 A	01-08-2000
			BG 105561 A	31-12-2001
			BR 0007527 A	04-12-2001
			CA 2359440 A1	20-07-2000
			CN 1336919 A ,C	20-02-2002
			CZ 20012248 A3	12-09-2001
			EA 3780 B1	28-08-2003
			EE 200100350 A	15-10-2002
			WO 0042020 A1	20-07-2000
			EP 1147089 A1	24-10-2001
			HR 20010578 A1	31-08-2002
			HU 0105001 A2	29-04-2002
			ID 29070 A	26-07-2001
			JP 2002534508 T	15-10-2002
			NO 20013341 A	17-09-2001
			NZ 512872 A	25-07-2003
			PL 348925 A1	17-06-2002
			SK 9802001 A3	03-12-2001
			TR 200101938 T2	21-12-2001
			UA 69436 C2	15-11-2001
			ZA 200104864 A	15-04-2003